In [1]:
```python
def caesar_cipher(text, shift, mode='encrypt'):
    result = ""


    if mode == 'decrypt':
        shift = -shift


    for char in text:
        if char.isalpha():
            shift_amount = shift % 26
            base = ord('A') if char.isupper() else ord('a')

            # Calculate the shifted character
            shifted_char = chr((ord(char) - base + shift_amount) % 26 + base)
            result += shifted_char
        else:
            result += char

    return result

def main():
    print("Caesar Cipher Program")
    mode = input("Would you like to encrypt or decrypt? ").lower()
    message = input("Enter your message: ")
    shift = int(input("Enter the shift value: "))

    if mode == 'encrypt':
        encrypted_message = caesar_cipher(message, shift, mode='encrypt')
        print(f"Encrypted message: {encrypted_message}")
    elif mode == 'decrypt':
        decrypted_message = caesar_cipher(message, shift, mode='decrypt')
        print(f"Decrypted message: {decrypted_message}")
    else:
        print("Invalid mode. Please enter 'encrypt' or 'decrypt'.")

if __name__ == "__main__":
    main()
```

```
Caesar Cipher Program
Would you like to encrypt or decrypt? encrypt
Enter your message: I am incredibly grateful to the team at Prodigy InfoTech for believing in my potential.
Enter the shift value: 17
Encrypted message: Z rd zetivuzscp xirkvwlc kf kyv kvrd rk Gifuzxp ZewfKvty wfi svczvmzex ze dp gfkvekzrc.
```

In [2]:
```python
def caesar_cipher(text, shift, mode='encrypt'):
    result = ""


    if mode == 'decrypt':
        shift = -shift


    for char in text:
        if char.isalpha():
            shift_amount = shift % 26
            base = ord('A') if char.isupper() else ord('a')

            # Calculate the shifted character
            shifted_char = chr((ord(char) - base + shift_amount) % 26 + base)
            result += shifted_char
        else:
            result += char

    return result

def main():
    print("Caesar Cipher Program")
    mode = input("Would you like to encrypt or decrypt? ").lower()
    message = input("Enter your message: ")
    shift = int(input("Enter the shift value: "))

    if mode == 'encrypt':
        encrypted_message = caesar_cipher(message, shift, mode='encrypt')
        print(f"Encrypted message: {encrypted_message}")
    elif mode == 'decrypt':
        decrypted_message = caesar_cipher(message, shift, mode='decrypt')
        print(f"Decrypted message: {decrypted_message}")
    else:
        print("Invalid mode. Please enter 'encrypt' or 'decrypt'.")

if __name__ == "__main__":
    main()
```

```
Caesar Cipher Program
Would you like to encrypt or decrypt? decrypt
Enter your message: Z rd zetivuzscp xirkvwlc kf kyv kvrd rk Gifuzxp ZewfKvty wfi svczvmzex ze dp gfkvekzrc
Enter the shift value: 17
Decrypted message: I am incredibly grateful to the team at Prodigy InfoTech for believing in my potential
```